The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (original) An isolated antibody which specifically binds to a protein receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2.

2. (original) The antibody of Claim 1, wherein said antibody is an agonist of said receptor.

3. (original) The antibody of Claim 1, wherein said antibody is an antagonist of said receptor.

4. (Currently amended) The antibody of Claim 1, ~~any one of claims 1, 2 or 3,~~ wherein said antibody is a monoclonal antibody.

5. (original) The monoclonal antibody of Claim 4, wherein said monoclonal antibody is directed to an epitope of said receptor, wherein said epitope is present on the surface of a cell expressing said receptor.

6. (Currently amended) A pharmaceutical composition comprising the antibody of claim 1, ~~claims 1, 2 or 3,~~ and ~~also~~ a pharmaceutically acceptable carrier.

7. (original) The pharmaceutical composition of Claim 6, wherein said antibody is a monoclonal antibody..

8. (withdrawn) A method for determining whether an antibody can specifically bind to a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) contacting a cell which expresses said receptor with the antibody, wherein said cell is transfected with an expression vector comprising the nucleic acid molecule encoding said receptor, and wherein said contacting is under conditions permitting binding of said antibody to said receptor, and

ii) detecting the presence or absence of the antibody bound specifically to said receptor, wherein the presence of the antibody indicates that the antibody can specifically bind to said receptor.

9. (withdrawn)A method for determining whether an antibody can specifically bind to a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) preparing a cell extract from cells transfected with an expression vector comprising the nucleic acid molecule encoding said receptor,

ii) isolating a membrane fraction from the cell extract,

iii) contacting the antibody with the membrane fraction under conditions permitting binding of the antibody to said receptor, and

iv) detecting the presence or absence of the antibody bound specifically to said receptor, wherein the presence of the antibody indicates that the antibody can specifically bind to said receptor.

10. (withdrawn) A method for determining whether an antibody is an agonist of a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) contacting a cell, which expresses said receptor, with the antibody, wherein said cell is transfected with an expression vector comprising the nucleic acid molecule encoding said receptor, wherein said contacting is under conditions permitting the activation of a functional receptor response from the antibody, and

ii) measuring the receptor activity by means of a bio-assay, wherein an increase of bioactivity indicates that the antibody is a receptor agonist.

11. (withdrawn) A method for determining whether an antibody is an agonist of a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) preparing a cell extract from cells which express said receptor, wherein said cell is transfected with an expression vector comprising the nucleic acid molecule encoding said receptor,

ii) isolating a membrane fraction from the cell extract,

iii) contacting the membrane fraction with the antibody under conditions permitting the activation of a functional receptor response, and

iv) measuring the receptor activity by means of a bio-assay, wherein an increase of bioactivity indicates that the antibody is a receptor agonist.

12. (withdrawn) A method for determining whether an antibody is an antagonist of a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) contacting a cell which expresses said receptor, with the antibody in the presence of a known receptor agonist, wherein said cell is transfected with an expression vector comprising a nucleic acid molecule encoding said receptor, wherein said contacting is under conditions permitting the activation of a functional receptor response, and

ii) measuring the activity of said receptor by means of a bio-assay, wherein a decrease in said activity indicates that the antibody is a receptor antagonist.

13. (withdrawn) A method for determining whether an antibody is an antagonist of a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, comprising the following steps:

i) preparing a cell extract from cells which express said receptor, wherein said cells are transfected with an expression vector comprising the nucleic acid molecule encoding said receptor,

ii) isolating a membrane fraction from the cell extract,

iii) contacting the membrane fraction with the antibody in the presence of a known receptor agonist, wherein said contacting occurs under conditions permitting the activation of a functional receptor response, and

iv) measuring the activity of said receptor by means of a bio-assay, wherein a decrease in said activity indicates that the antibody is a receptor antagonist.

14. (withdrawn) The method according to any one of claims 10, 11, 12 and 13, wherein said bio-assay measures a modification in a second messenger concentration or a modification in the cellular metabolism.

15. (withdrawn) The method according to claim 14, wherein said bio-assay comprises a measurement of intra-cellular cAMP, intra-cellular inositol phosphate, intra-cellular diacylglycerol concentration, or intra-cellular calcium mobilization.

16. (withdrawn) The method according to any one of claims 10, 11, 12 and 13, wherein the cell is a mammalian cell.

17. (withdrawn) The method according to claim 16, wherein said mammalian cell is selected from the group consisting of COS-7 cells, CHO cells, LM(tk-) Cells, NIH-3T3 cells or 1321N1 cells.

18.(withdrawn) A method of detecting the presence of a receptor on the surface of a cell, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, wherein said method comprises contacting the cell with the antibody of claim 1 under conditions permitting the binding of the antibody to the receptor, and detecting the presence of the antibody bound to the cell, thereby detecting the presence of the receptor on the surface of the cell.

19. (withdrawn) A method for diagnosing a predisposition to a disorder associated with the activity of a specific allele of a receptor, wherein said receptor comprises the amino acid sequence shown in SEQ ID NO:2, wherein said method comprises:

a) obtaining nucleic acid molecules of subjects suffering from said disorder;

b) performing a restriction digest of said nucleic acid molecules with a panel of restriction enzymes;

c) electrophoretically separating the resulting nucleic acid fragments on a sized gel;

d) contacting the resulting gel with a nucleic acid probe capable of specifically hybridizing to said nucleic acid molecules and labeled with a detectable marker;

e) detecting labeled bands which have hybridized to the said nucleic acid molecule labeled with a detectable marker to create a unique band pattern specific to subjects suffering from said disorder;

f) preparing nucleic acid molecules obtained for diagnosis from subjects without a predisposition for the disorder by steps a-e; and

g) comparing the unique band pattern specific to the nucleic acid molecule of subjects suffering from the disorder from step e and the nucleic acid molecule obtained for diagnosis from step f) to determine whether the patterns are the same or different and to diagnose thereby predisposition to the disorder if the pattern are the same.

20. (New) The antibody of claim 2 or of claim 3, wherein said antibody is a monoclonal antibody.

21. (New) A pharmaceutical composition comprising the antibody of claim 2 or of claim 3, and a pharmaceutically acceptable carrier.

22. (New) The monoclonal antibody of Claim 20, wherein said monoclonal antibody is directed to an epitope of said receptor, wherein said epitope is present on the surface of a cell expressing said receptor.

23. (New) A composition comprising the antibody of any one of claims 1, 2 and 3, and a carrier.